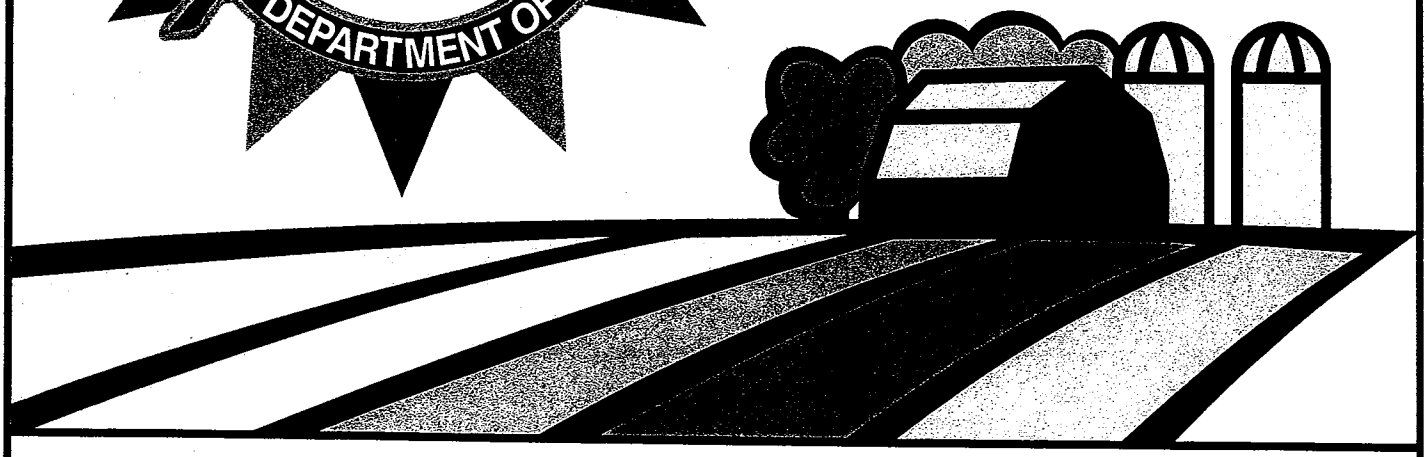
ANIMAL WASTE MANAGEMENT PLAN

GARY FISHER

POULTRY PRODUCTION OPERATION

CHEROKEE COUNTY, OKLAHOMA



WATER QUALITY SERVICES DIVISION

OKLAHOMA DEPARTMENT OF AGRICULTURE

P. O. Box 528804, Oklahoma City, Oklahoma 73105

Exhibit O

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ANIMAL WASTE MANAGEMENT PLAN
GARY FISHER
POULTRY PRODUCTION OPERATION
CHEROKEE COUNTY, OKLAHOMA
JUNE 2007

A. INTRODUCTION

The land application of nutrients in excess of crop needs may lead to water quality problems. It is important to manage the poultry litter in an environmentally safe manner. Historically in Oklahoma, poultry litter has been used in land application for its nitrogen (N) value. However, in doing so, an excess amount of phosphorus (P) is accumulated in the soil.

Since plants take up and remove only about 10 to 25 percent as much P as N, a significant build up of P in the soil can take place over a period time which may lead to the degradation of down stream water resources. Due to these water quality concerns, future land application of poultry litter will be based upon phosphorus content of the soil and poultry litter. This Animal Waste Management Plan (AWMP), was prepared to meet the regulatory requirements under the Oklahoma Registered Poultry Feeding Operations Act and the rules and regulations developed under the Act. This AWMP includes a combination of conservation and management practices designed to protect the natural resources of the state.

This plan was developed based on the requirements of the current standard and any applicable federal, state, or local regulations or policies; and that change in any of these requirements may necessitate a revision of this plan. This plan will need to be revised at the end of six years, which will be June 2013.

B. DESCRIPTION OF THE OPERATION

This animal waste management plan was developed in June 2007 for the Gary Fisher poultry farm located in section 2-T18N-R22E Cherokee county, Oklahoma. This turkey operation consists of three houses. The two brooder houses are 40 feet wide and 400 feet long and were built in 1973. The grow out house is 40 feet wide and 600 feet long and was built in 1975. The brooder houses have a capacity for approximately 18,700 birds per flock. Approximately 5 flocks of turkeys are raised each year for a total yearly production of 93,500 turkeys.

Wood shavings are used for bedding. Ordinarily each house is caked out after each batch of turkeys and completely cleaned out each year, but clean out may vary. The average yearly production of litter from these three houses is 460 tons.

This operation has the necessary equipment to clean out houses and spread litter. The litter will be spread on the surface of the ground when removed, if conditions are

favorable for spreading. Otherwise, litter will be stored in such a manor to be protected from rainfall and run-off until conditions are favorable for spreading.

This operation utilizes land in seven different sections to apply litter. There will be sufficient acres to use all litter generated by this operation.

The base pasture grass of this operation is common bermuda grass, with a mixture of native warm and cool seasonal grasses that make up a minor part of production.

C. ENVIRONMENTAL ASSESSMENT

This poultry operation is in the Ozark Highland Major Land Resource Areas. The soils are formed from cherty limestone of the Boone formation of Mississippian age.

This operation is in a nutrient limited watershed (Fort Gibson). This operation is in a nutrient vulnerable ground water area, therefore a new soil and litter test will be required every year. The ground water vulnerability is high. There are ponds and water wells in this area, but no perennial streams run through this operation. If the recommended management practices are followed, there should be no adverse environmental impact.

OKLAHOMA DEPARTMENT OF AGRICULTURE, FOOD, & FORESTRY
AGRICULTURAL ENVIRONMENTAL MANAGEMENT SERVICES

Legal Location Platt

NORTH

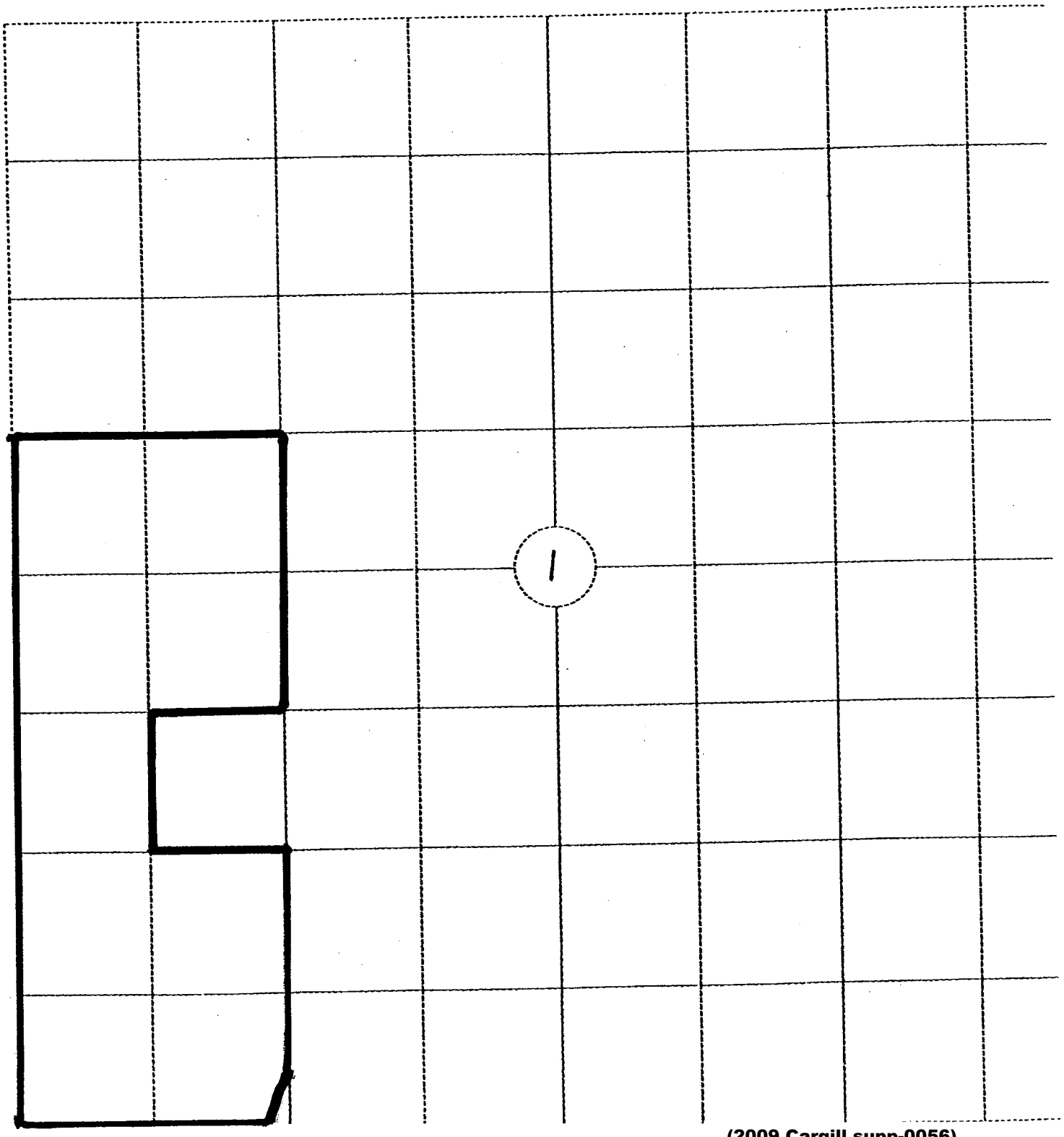
Size: 10 acre

Scale: 1" = 660'

Facility Name Gary Fisher

Legal Desc. ___, ___, ___ Sec 1 T18N R22E Mer. ___

County Cherokee



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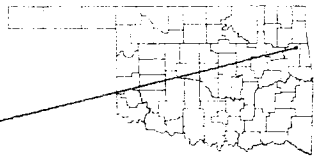

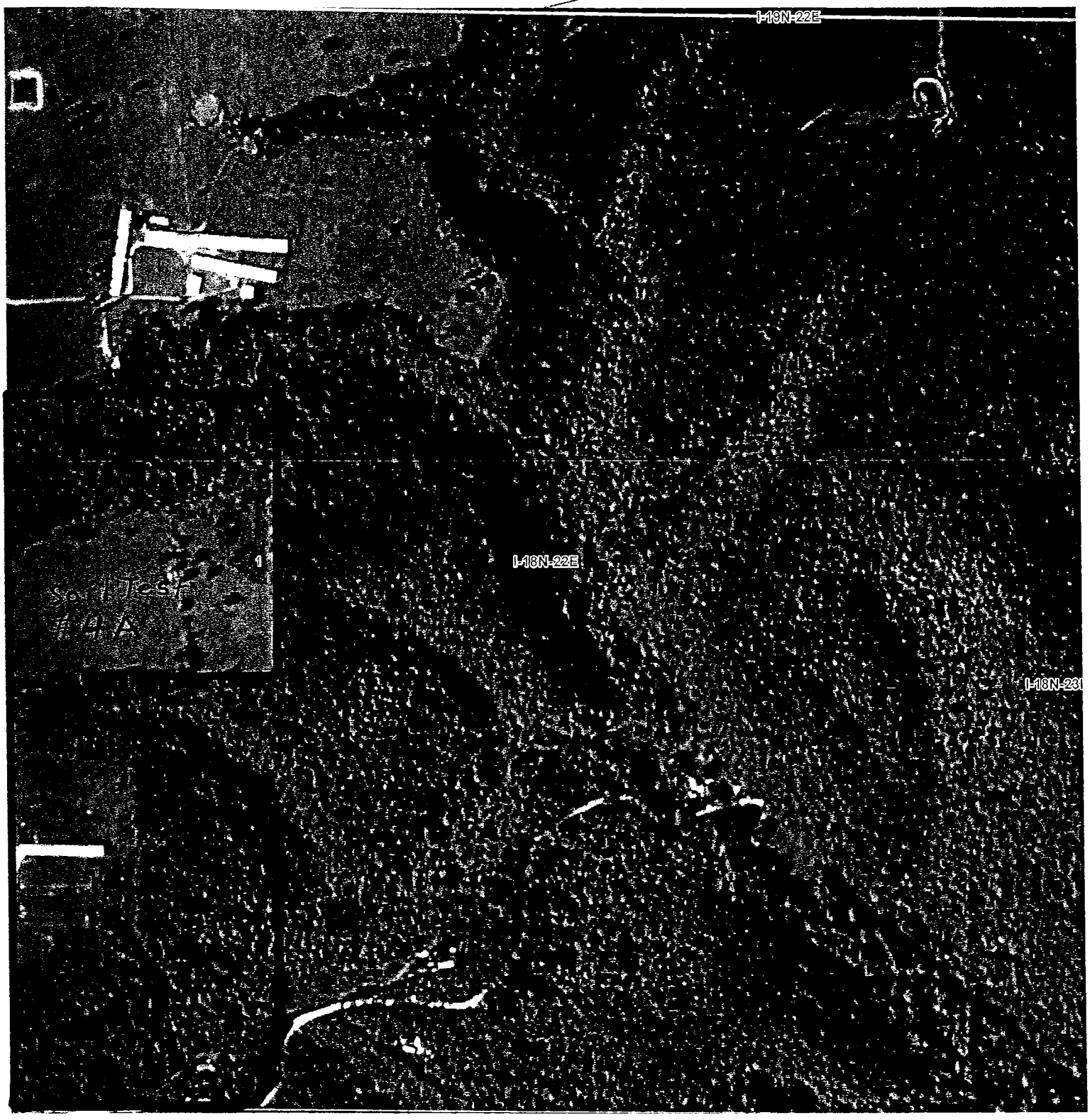

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Feet

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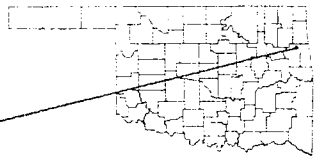
Cherokee County, OK



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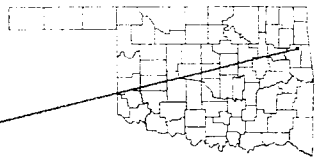
Cherokee County, OK



0 660 1320 1980 2640 Feet

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Soil Legend and Brief Soil Description

Cab-Captina silt loam, 1 to 3 percent slopes.

This is a deep, moderately well drained soil on uplands. The surface layer is silt loam, the upper part of the sub-soil is a silty clay loam and the lower part is a gravelly silty clay loam. Permeability is slow and available water capacity is high.

CkD-Clarksville very gravelly silt loam, 1 to 8 percent slopes.

This is a deep, somewhat excessively drained soil on uplands. The surface layer is a very gravelly silt loam and the upper part of the subsoil is a very gravelly silty clay loam and the lower part is a very gravelly silty clay., Permeability is moderate and available water capacity is medium to low.

ClE-Clarksville stony silt loam, 5 to 20 percent slopes.

This is a deep, somewhat excessively drained soil on uplands. The surface layer is a stony silt loam, The upper part of the subsoil is a very gravelly silty clay loam and the lower part is a very gravelly silty clay. Permeability is moderate and available water capacity is low.

ClF-Clarksville stony silt loam, 20 to 50 percent slopes.

This is a deep, somewhat excessively drained soil on uplands. The surface layer is a stony silt loam, The upper part of the subsoil is a very gravelly silty clay loam and the lower part is a very gravelly silty clay. Permeability is moderate and available water capacity is low.

Es-Elsah very gravelly loam, 0 to 3 percent slopes, frequently flooded.

This is a deep, somewhat excessively drained soil on flood plains. The surface layer is a very gravelly loam and the subsoil is a very gravelly loam. Permeability is moderate and available water capacity is medium.

LoB-Tonti gravelly silt loam, 1 to 3 percent slopes.

This is a deep, moderately well drained soil on uplands. The surface layer is a gravelly silt loam. The upper subsoil is a very gravelly silty clay loam and the lower part is a very gravelly silty clay. Permeability is slow and available water capacity is medium.

SgB-Britwater gravelly loam, 1 to 3 percent slopes.

This is a deep, well drained soil on uplands. The surface layer is a silt loam and the subsoil is a very gravelly silty clay loam. Permeability is moderate and available water capacity is medium to high.

SgD-Britwater gravelly silt loam, 3 to 8 percent slopes.

This is a deep, well drained soil on uplands. The surface layer is a silt loam and the subsoil is a very gravelly silty clay loam. Permeability is moderate and available water capacity is medium to high.

SrA-Stigler silt loam. 0 to 1 percent slopes.

This is a deep, somewhat poorly drained soil on uplands. The surface layer is a silt loam and the subsoil is a silty clay loam. Permeability is very slow and water capacity is high. This soil has a perched water table with 1 to 2 feet of surface in wet seasons.

OKLAHOMA COOPERATIVE EXTENSION SERVICE

SOIL, WATER & FORAGE ANALYTICAL LABORATORY

Division of Agricultural Sciences and Natural Resources • Oklahoma State University
Plant and Soil Sciences • 045 Agricultural Hall • Stillwater, OK 74078
Email: soils_lab@mail.pss.okstate.edu
Website: www.soiltesting.okstate.edu

SOIL TEST REPORT

Field 4A Sec 1

CHEROKEE CTY EXTENSION OFFICE

908 S COLLEGE
TAHLEQUAH, OK 74464
(918) 456-6163

Name: Gary Fisher

Location: # 4A

Lab ID No.:	458978
Customer Code:	11
Sample No.:	3658
Received:	4/10/2007
Report Date:	4/12/2007

- Routine Test -		- Secondary Nutrients -	- Micronutrients -
pH:	4.7	SO_4-S(lbs/A)	Fe (ppm):
Buffer Index:	6.3	Surface:	Zn (ppm):
NO_3-N(lbs/A)		Subsoil:	B (ppm):
Surface:	11	Ca (lbs/A):	Cu (ppm):
Subsoil:		Mg (lbs/A):	
Soil Test P Index:	37		
Soil Test K Index:	95	**- Additional Tests -**	

INTERPRETATION AND REQUIREMENTS FOR *No Crop Provided* **(YIELD GOAL =)**

- Test -	- Interpretation -	- Requirement -	- Recommendations and Comments -
			For Litter

Roger Willow
Signature

OKLAHOMA COOPERATIVE EXTENSION SERVICE

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Website: www.soiltesting.okstate.edu

ANIMAL WASTE ANALYSIS REPORT

CHEROKEE CTY EXTENSION OFFICE

908 S COLLEGE
TAHLEQUAH , OK 74464

Name: Gary Fisher
20216 E 660 Rd
Location: Tahlequah

Lab ID No:	458887
Customer Code:	11
Sample No:	3655
Date Received:	4/10/2007
ReportDate	4/17/2007

TEST RESULTS FOR: Solid **SOURCE:** Poultry

TEST	As Received	As Received lbs/ton	Dry Basis lbs/ton
Moisture	26.5 %		
DryMatter	73.5 %		
pH	8.7		
EC	11220 µS		
Soluble Salts:	7517 ppm	15.03	20.46
Phosporus (P2O5)	4.75 %	95.0	129.3
Calcium (Ca)	3.51 %	70.2	95.6
Potassium (K2O)	3.05 %	61.1	83.1
Magnesium (Mg)	0.63 %	12.6	17.2
Sodium (Na)	0.67 %	13.3	18.2
Sulfur (S)	0.68 %	13.6	18.5
Iron (Fe)	3900.9 ppm	7.80	10.62
Zinc (Zn)	690.4 ppm	1.38	1.88
Copper (Cu)	577.5 ppm	1.16	1.57
Manganese (Mn)	832.7 ppm	1.67	2.27
Total C	18.7 %	374.0	509
Total N	2.73 %	54.58	74

Signature

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OKLAHOMA DEPARTMENT OF AGRICULTURE, FOOD & FORESTRY
AGRICULTURAL ENVIRONMENTAL MANAGEMENT SERVICES

Legal Location Platt

NORTH

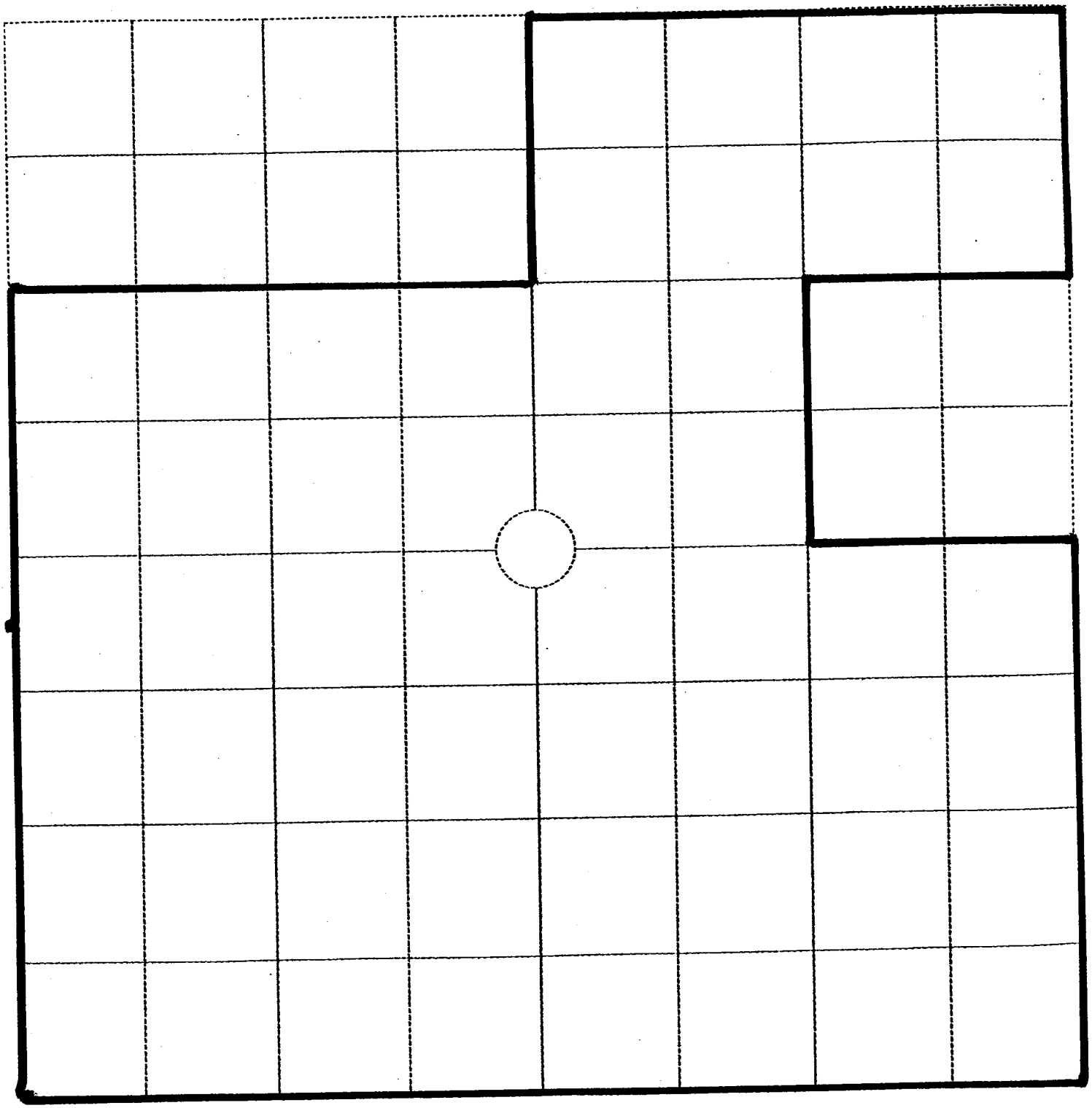
Size:
10 acre

Scale:
1" = 660 '

Facility Name Gary Fisher

Legal Desc. ___, ___, ___ Sec 2 T 18N R 22E Mer. ___

County Cherokee



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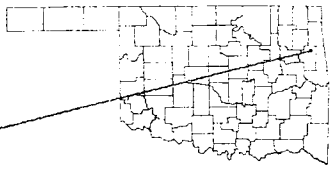
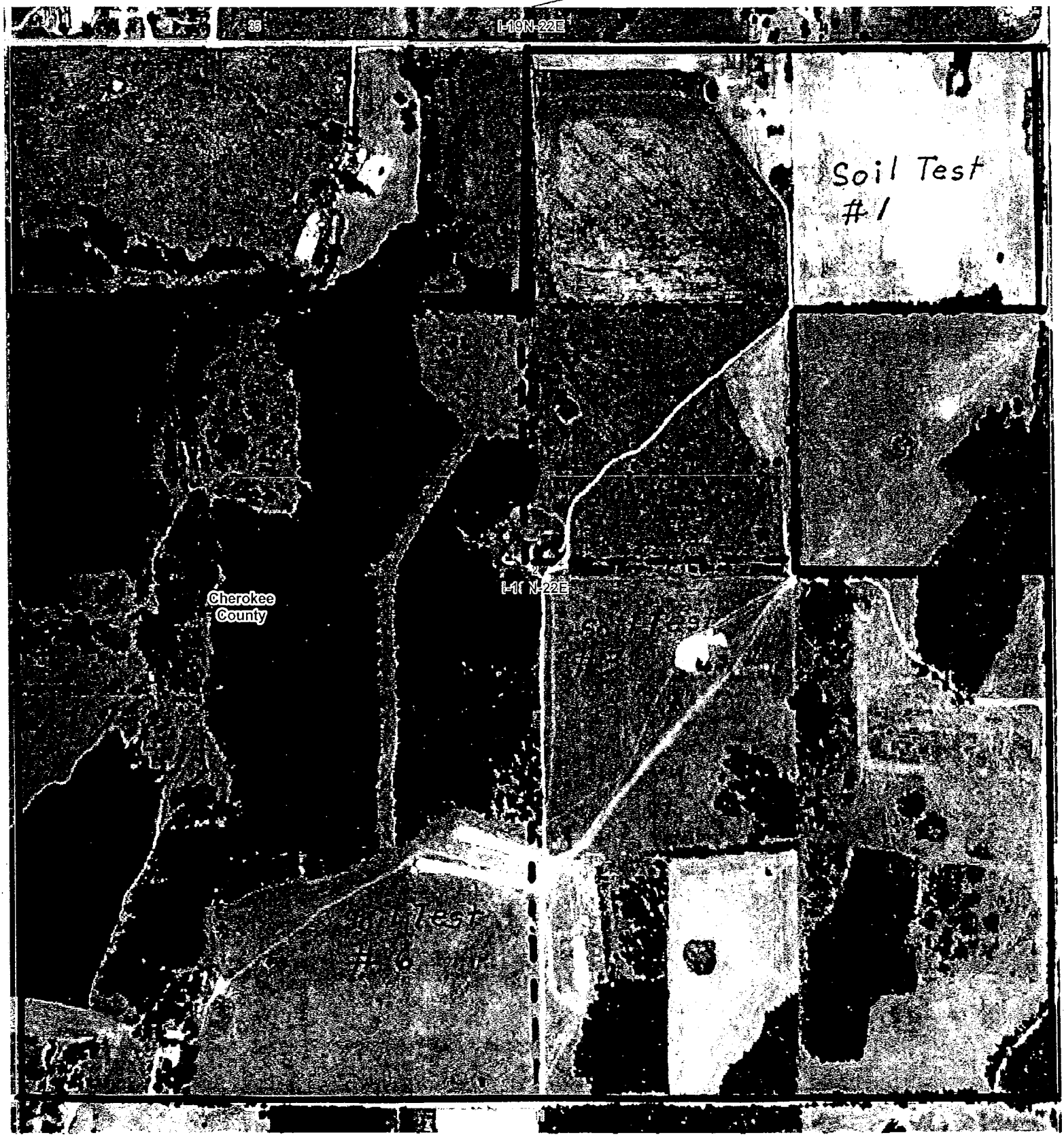
Cherokee County, OK





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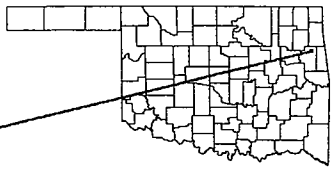
Cherokee County, OK



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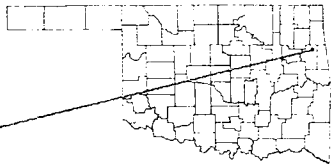
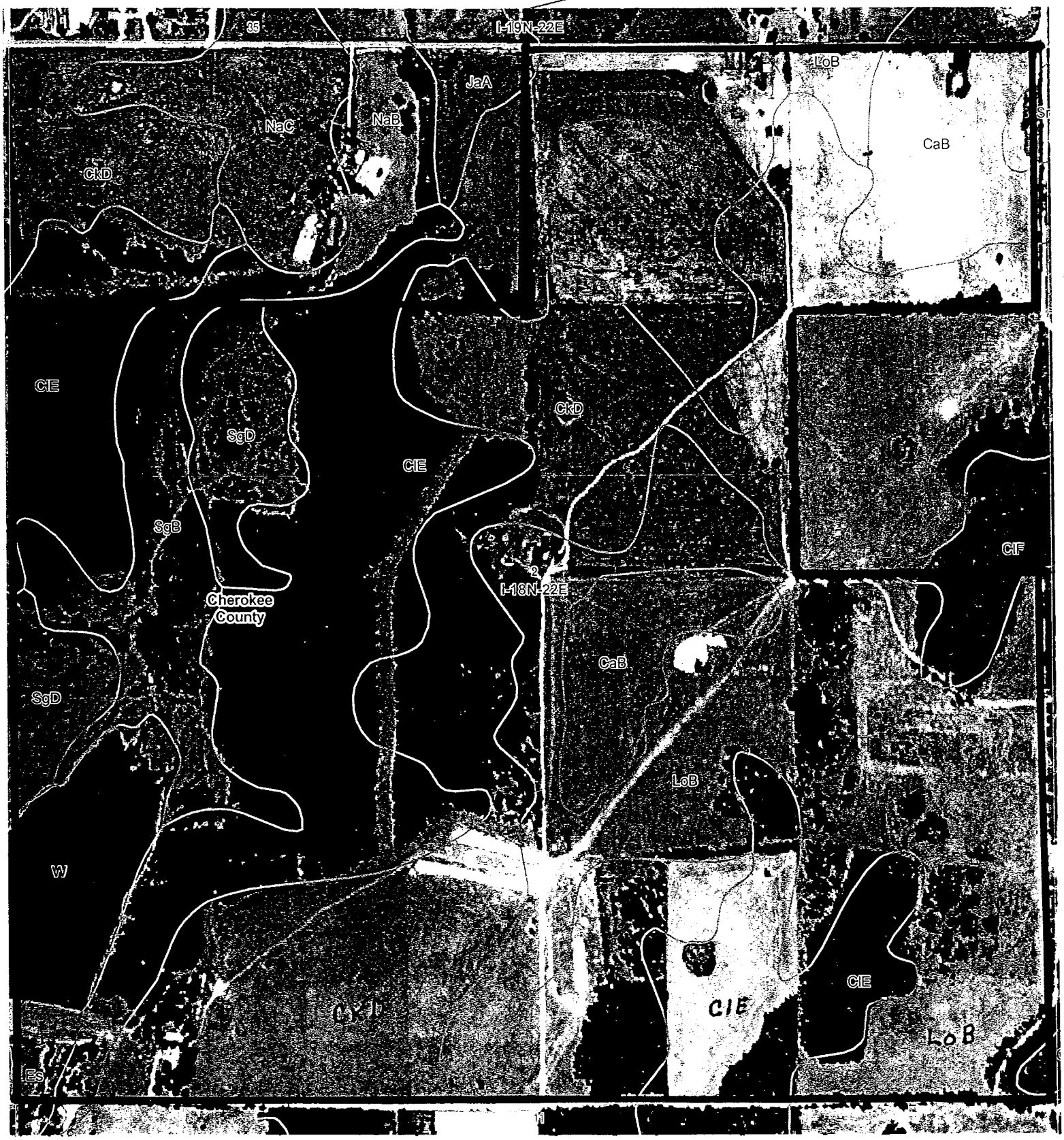
Cherokee County, OK





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Email: soils_lab@mail.pss.okstate.edu
Website: www.soiltesting.okstate.edu

SOIL TEST REPORT

Field 1 Sec 2

CHEROKEE CTY EXTENSION OFFICE

908 S COLLEGE
TAHLEQUAH, OK 74464
(918) 456-6163

Name: Gary Fisher
Location: 20216 E660Rd Tahlequah

Lab ID No.: 458976
Customer Code: 11
Sample No.: 3656
Received: 4/10/2007
Report Date: 4/12/2007

- Routine Test -		- Secondary Nutrients -		- Micronutrients -	
pH:	5.1	SO_4-S(lbs/A)		Fe (ppm):	
Buffer Index:	6.3	Surface:		Zn (ppm):	
NO_3-N(lbs/A)		Subsoil:		B (ppm):	
Surface:	80	Ca (lbs/A):		Cu (ppm):	
Subsoil:		Mg (lbs/A):			
Soil Test P Index:	206				
Soil Test K Index:	542	**- Additional Tests -**			

INTERPRETATION AND REQUIREMENTS FOR *No Crop Provided* **(YIELD GOAL =)**

- Test -	- Interpretation -	- Requirement -	- Recommendations and Comments -
			For Litter

Signature

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Plant and Soil Sciences • 045 Agricultural Hall • Stillwater, OK 74078
Email: soils_lab@mail.pss.okstate.edu
Website: www.soiltesting.okstate.edu

SOIL TEST REPORT

Field 3 Sec 2

CHEROKEE CTY EXTENSION OFFICE

908 S COLLEGE
TAHLEQUAH, OK 74464
(918) 456-6163

Name: Gary Fisher

Location: # 3

Lab ID No.: 458977
Customer Code: 11
Sample No.: 3657
Received: 4/10/2007
Report Date: 4/12/2007

- Routine Test -		- Secondary Nutrients -	- Micronutrients -
pH:	5.0	SO_4-S(lbs/A)	Fe (ppm):
Buffer Index:	6.5	Surface:	Zn (ppm):
NO_3-N(lbs/A)		Subsoil:	B (ppm):
Surface:	18	Ca (lbs/A):	Cu (ppm):
Subsoil:		Mg (lbs/A):	
Soil Test P Index:	29		
Soil Test K Index:	219	- Additional Tests -	

INTERPRETATION AND REQUIREMENTS FOR *No Crop Provided* **(YIELD GOAL =)**

- Test -	- Interpretation -	- Requirement -	- Recommendations and Comments -
			For Litter

Signature

(2009-Cargill-supp-0069)

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Plant and Soil Sciences • 045 Agricultural Hall • Stillwater, OK 74078
Email: soils_lab@mail.pss.okstate.edu
Website: www.soiltesting.okstate.edu

SOIL TEST REPORT

Field 6 Sec 2

CHEROKEE CTY EXTENSION OFFICE

908 S COLLEGE
TAHLEQUAH, OK 74464
(918) 456-6163

Name: Gary Fisher

Location: # 6

Lab ID No.: 458980
Customer Code: 11
Sample No.: 3659
Received: 4/10/2007
Report Date: 4/12/2007

- Routine Test -		- Secondary Nutrients -	- Micronutrients -
pH:	4.7	SO_4-S(lbs/A)	Fe (ppm):
Buffer Index:	6.4	Surface:	Zn (ppm):
NO_3-N(lbs/A)		Subsoil:	B (ppm):
Surface:	22	Ca (lbs/A):	Cu (ppm):
Subsoil:		Mg (lbs/A):	
Soil Test P Index:	34		
Soil Test K Index:	165	- Additional Tests -	

INTERPRETATION AND REQUIREMENTS FOR *No Crop Provided* **(YIELD GOAL =)**

- Test -	- Interpretation -	- Requirement -	- Recommendations and Comments -
			For Litter

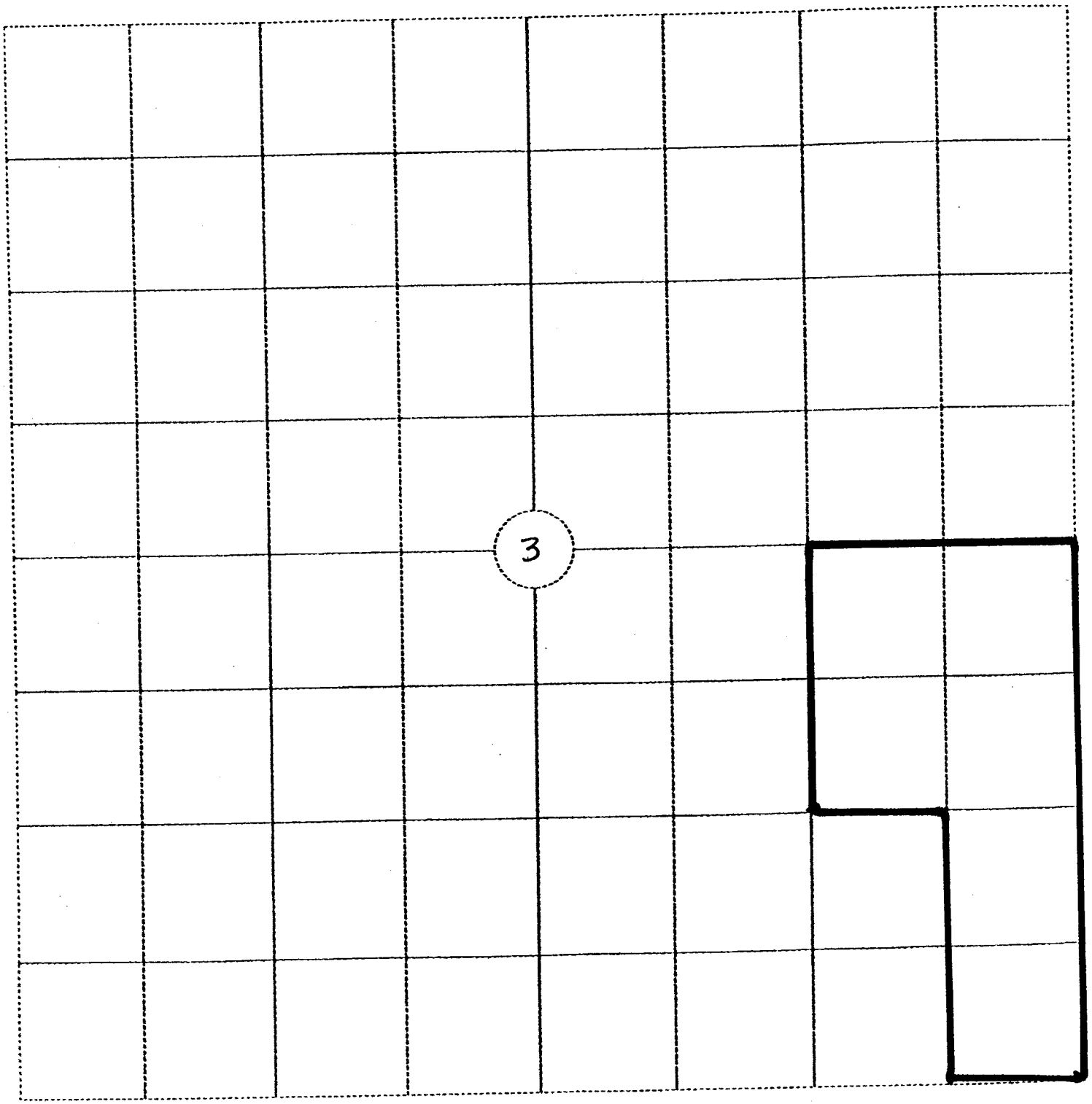
Roger Williams
Signature

OKLAHOMA DE RTMENT OF AGRICULTURE, F OD, & FORESTRY
AGRICULTURAL ENVIRONMENTAL MANAGEMENT SERVICES
Legal Location Platt

NORTH

Size: 10 acre
Scale: 1" = 660'

Facility Name Gary Fisher
Legal Desc. ___, ___, ___ Sec 3 T18N R22E Mer. ___
County Cherokee



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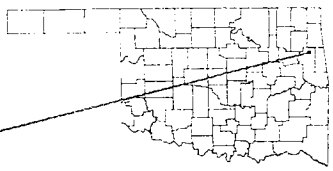
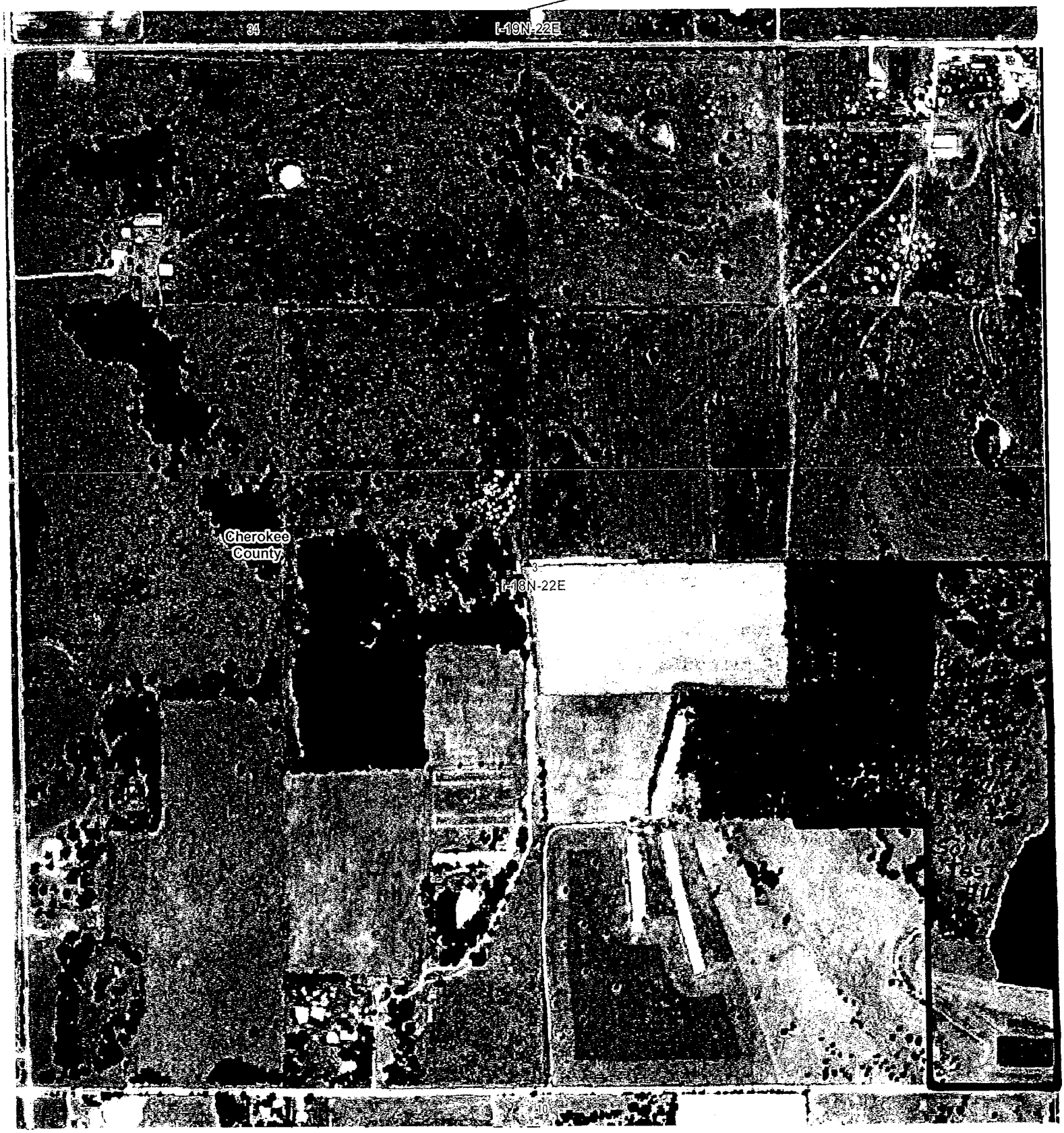
Cherokee County, OK





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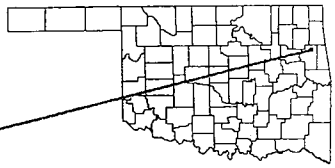
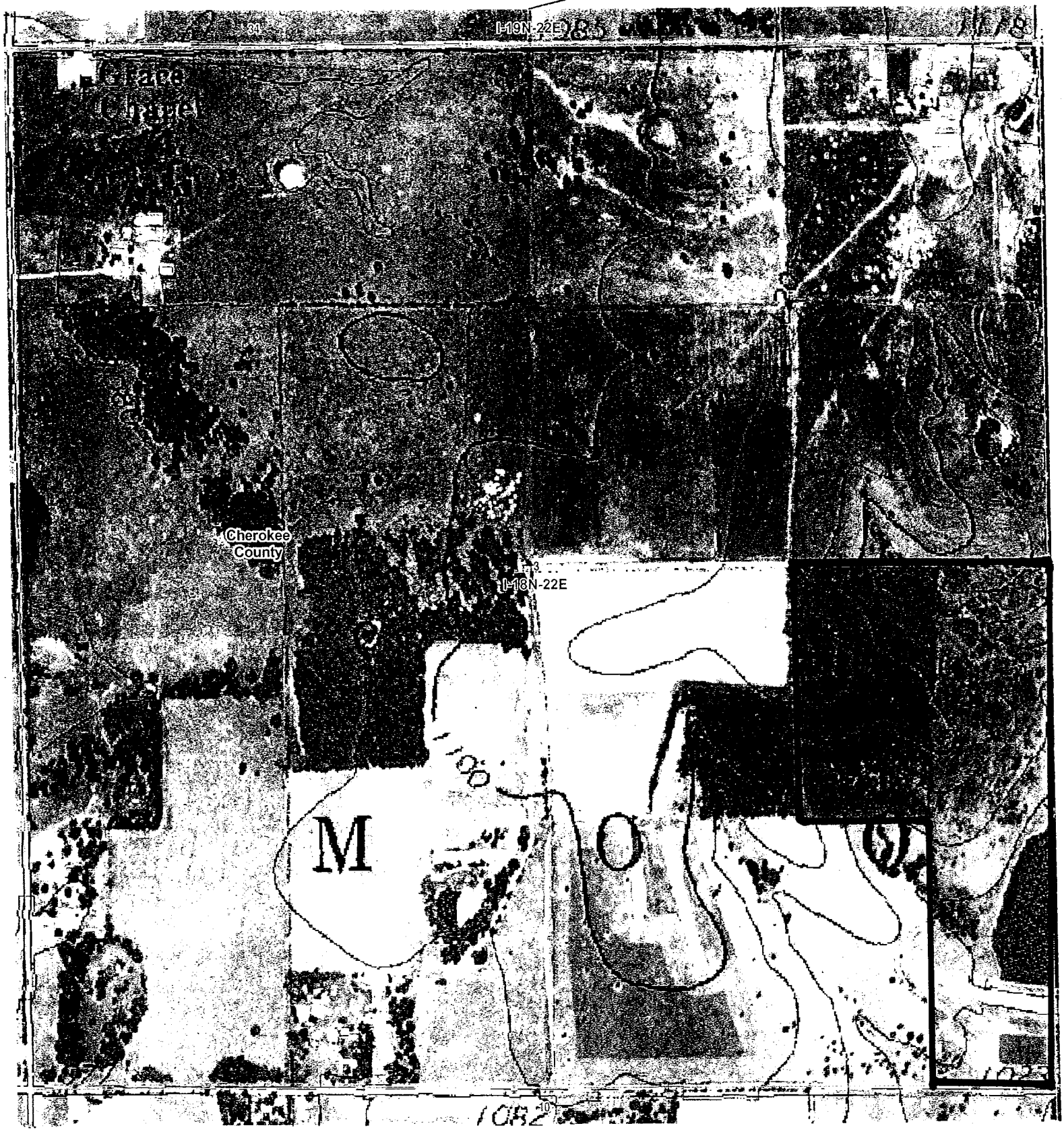
Cherokee County, OK





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S3 T18N R22E
Cherokee County, OK

0 660 1320 1980 2640 Feet

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Plant and Soil Sciences • 045 Agricultural Hall • Stillwater, OK 74078
Email: soils_lab@mail.pss.okstate.edu
Website: www.soiltesting.okstate.edu

SOIL TEST REPORT Field 16 Sec 3

CHEROKEE CTY EXTENSION OFFICE
908 S COLLEGE
TAHLEQUAH, OK 74464
(918) 456-6163

Name: Gary Fisher
Location: # 16

Lab ID No.: 458985
Customer Code: 11
Sample No.: 3664
Received: 4/10/2007
Report Date: 4/12/2007

- Routine Test -		- Secondary Nutrients -	- Micronutrients -
pH:	5.5	SO_4-S(lbs/A)	Fe (ppm):
Buffer Index:	6.7	Surface:	Zn (ppm):
NO_3-N(lbs/A)		Subsoil:	B (ppm):
Surface:	15	Ca (lbs/A):	Cu (ppm):
Subsoil:		Mg (lbs/A):	
Soil Test P Index:	31		
Soil Test K Index:	880	- Additional Tests -	

INTERPRETATION AND REQUIREMENTS FOR *No Crop Provided* **(YIELD GOAL =)**

- Test -	- Interpretation -	- Requirement -	- Recommendations and Comments -
			For Litter

Roger Williams
Signature